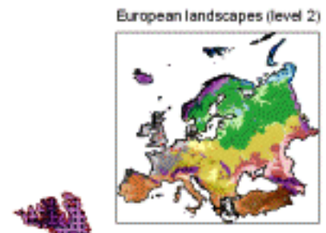
ALTERRA
WAGENINGEN UR

LANDSCAPE EUROPE

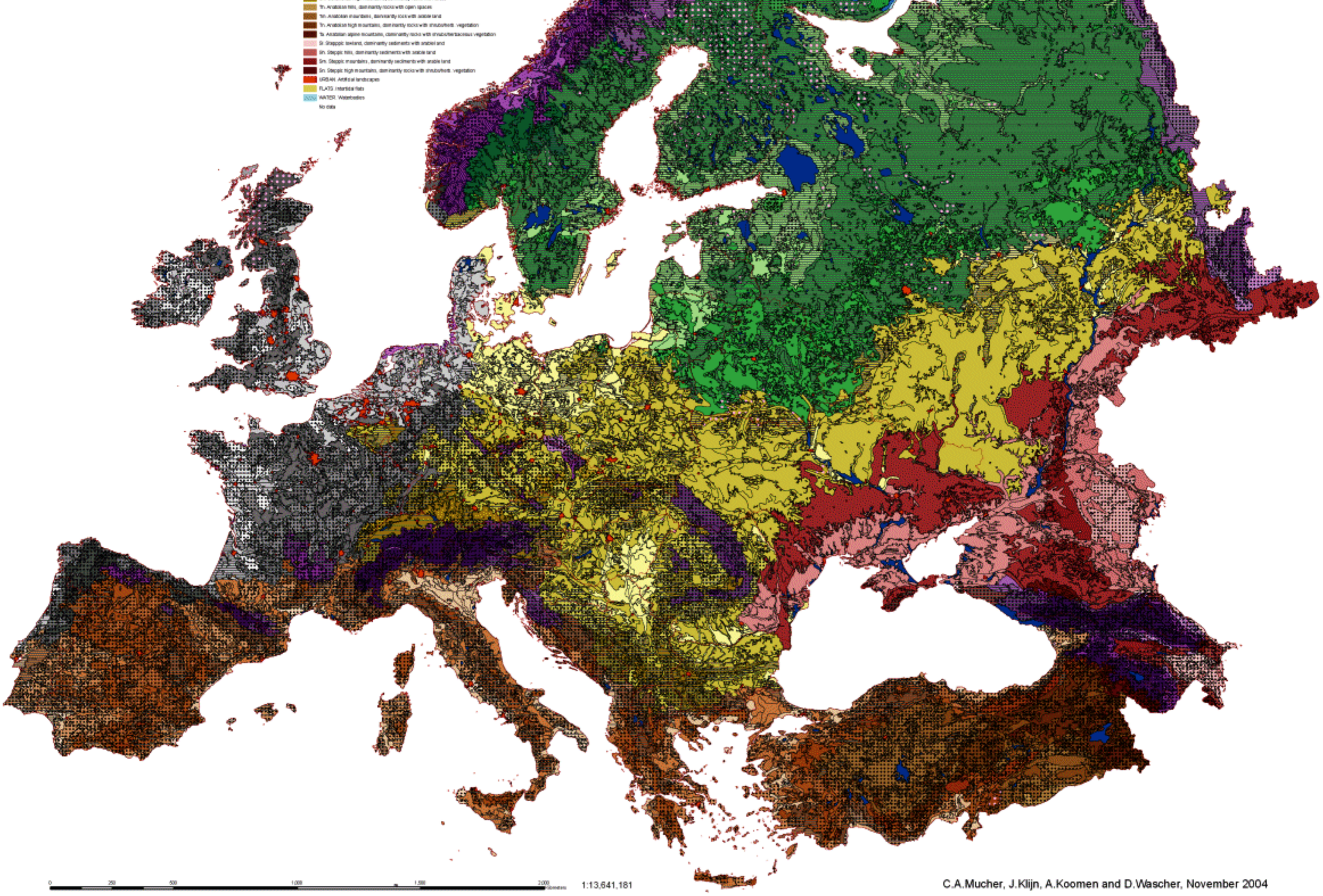
European landscapes
A physiographic approximation



Legend level 2

- M. Arctic lowland, dominantly rocks with shrubs/herbaceous vegetation
- Mh. Arctic hills, dominantly rock with shrubs/herbaceous vegetation
- Mm. Arctic mountains, dominantly rocks with open spaces
- B. Boreal lowland, dominantly sediment with forest
- Bh. Boreal hills, dominantly sediments with forest
- Bm. Boreal mountains dominantly sediments with shrubs/herbaceous vegetation
- Al. Atlantic lowland, dominantly sediments with arable land
- Ah. Atlantic hills, dominantly rocks with arable land and pastures
- Am. Atlantic mountains, dominantly rocks with shrubs/herbaceous vegetation
- Z. Alpine lowlands, dominantly sediments with shrubs/herb. vegetation
- Zh. Alpine hills, dominantly sediments with shrubs/herb. vegetation
- Zm. Alpine mountains, dominantly rocks with forest
- Zn. Alpine high mountains, dominantly rocks with forest
- Za. Alpine high mountains, dominantly rocks with shrubs/herb. vegetation
- M. Mediterranean lowland, dominantly sediment with arable land
- Mh. Mediterranean hills, dominantly rocks with arable land
- Mm. Mediterranean mountains, dominantly rocks with forest
- Mn. Mediterranean high mountains, dominantly rocks with shrubs/herbaceous vegetation
- Ma. Mediterranean alpine mountains, dominantly rocks with shrubs/herbaceous vegetation
- C. Continental lowland, dominantly sediment with arable land
- Ch. Continental hills, dominantly sediments with arable land
- Cm. Continental mountains, dominantly rocks with forest
- Cn. Continental high mountains, dominantly rocks with forest
- Th. Anatolian hills, dominantly rocks with open spaces
- Tm. Anatolian mountains, dominantly rocks with arable land
- Tn. Anatolian high mountains, dominantly rocks with shrubs/herb. vegetation
- Ta. Anatolian alpine mountains, dominantly rocks with shrubs/herbaceous vegetation
- St. Steppic lowland, dominantly sediments with arable land
- Sh. Steppic hills, dominantly sediments with arable land
- Sm. Steppic mountains, dominantly sediments with arable land
- Sn. Steppic high mountains, dominantly rocks with shrubs/herb. vegetation
- URBAN. Artificial landscapes
- FLATS. Intertidal flats
- WATER. Waterbodies
- No data

LANMAP2

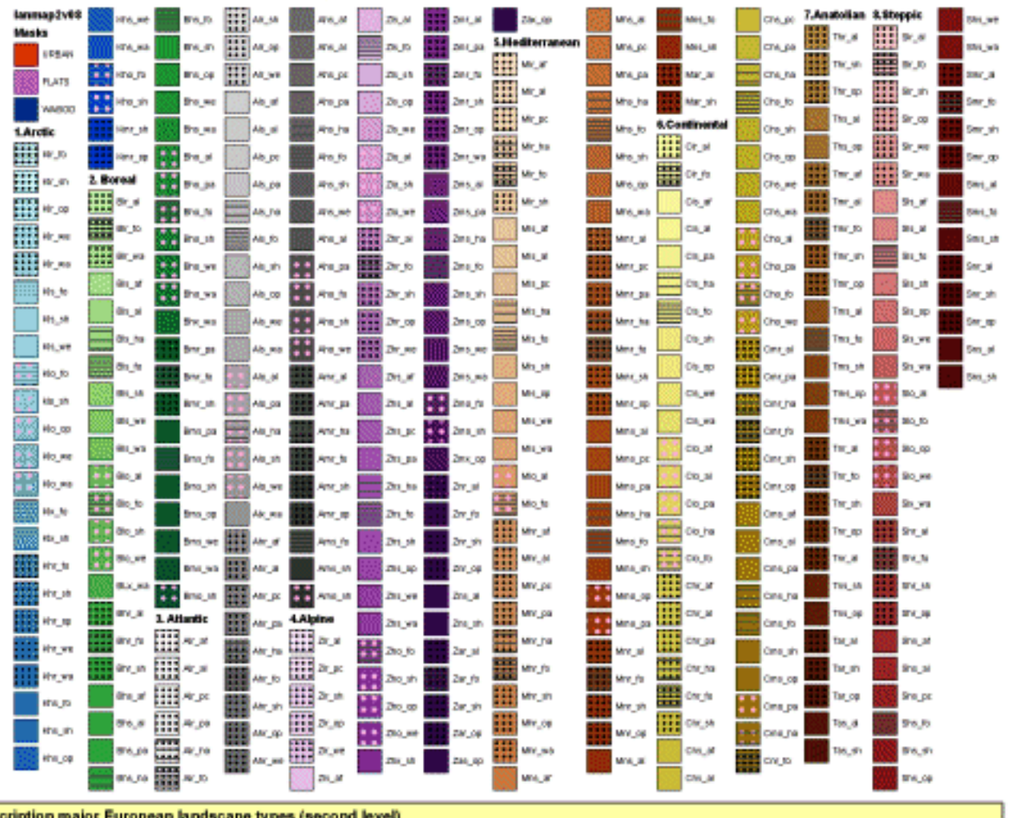


0 250 500 1000 1500 2000 Kilometers

1:13,641,181

C.A.Mucher, J.Klijn, A.Koomen and D.Wascher, November 2004

Legend European landscape types



Description major European landscape types (second level)

Al	Atlantic lowlands, dominantly sediments with arable land	Mm	Mediterranean mountains, dominantly rock with forest
Ah	Atlantic hills, dominantly rock with arable land and pastures	Mn	Mediterranean high mountains, dominantly rock with shrubs/herbaceous vegetation
Am	Atlantic mountains, dominantly rock with shrubs/herbaceous vegetation	Ma	Mediterranean alpine mountains, dominantly rock with shrubs/herbaceous vegetation
Bl	Boreal lowlands, dominantly sediment with forest	Sl	Steppic lowlands, dominantly sediments with arable land
Bh	Boreal hills, dominantly sediment with forest	Sh	Steppic hills, dominantly sediments with arable land
Bm	Boreal mountains, dominantly sediment with shrubs/herbaceous vegetation	Sm	Steppic mountains, dominantly sediments with arable land
Cl	Continental lowlands, dominantly sediment with arable land	Sn	Steppic high mountains, dominantly rock with shrubs/herbaceous vegetation
Ch	Continental hills, dominantly sediment with arable land	Th	Anatolian hills, dominantly rock with open spaces
Cm	Continental mountains, dominantly rock with forest	Tm	Anatolian mountains, dominantly rock with arable land
Cn	Continental high mountains, dominantly rock with forest	Tn	Anatolian high mountains, dominantly rock with shrubs/herbaceous vegetation
Kl	Arctic lowlands, dominantly rock with shrubs/herbaceous vegetation	Ta	Anatolian alpine mountains, dominantly rock with shrubs/herbaceous vegetation
Kh	Arctic hills, dominantly rock with shrubs/herbaceous vegetation	Zl	Alpine lowlands, dominantly sediment with shrubs/herbaceous vegetation
Km	Arctic mountains, dominantly rock with open spaces	Zh	Alpine hills, dominantly sediment with herbaceous vegetation
Ml	Mediterranean lowlands, dominantly sediment with arable land	Zm	Alpine mountains, dominantly rock with forest
Mh	Mediterranean hills, dominantly rock with arable land	Zn	Alpine high mountains, dominantly rock with forest
		Za	Alpine alpine mountains, dominantly rock with shrubs/herbaceous vegetation and open spaces

Explanation Legend

1. Environmental zone
- K. Arctic
- B. Boreal
- A. Atlantic
- Z. Alpine
- M. Mediterranean
- C. Continental
- T. Anatolian
- S. Steppic

2. Topography
- l. Lowlands
- h. Hills
- m. Mountains
- n. High Mountains
- a. Alpine

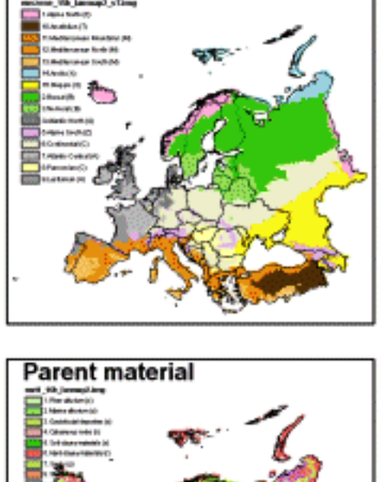
3. Parent material
- r. Rocks
- s. Sediments
- o. Organic material
- x. unclassified

4. Land use
- af. Artificial surfaces
- al. Arable land
- pc. Permanent crops
- pa. Pastures
- ha. Heterogeneous agricicultur areas
- fo. Forests
- sh. Shrubs and herbaceous (semi-) natural vegetation
- op. Open spaces with little or no vegetation
- we. Wetlands
- wa. Waterbodies

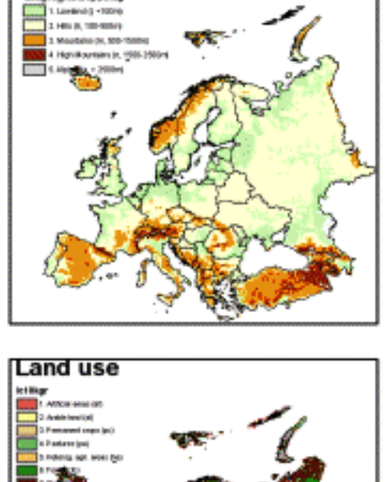
Masks
- URBAN, built-up areas
- FLATS, intertidal flats
- WABOD, waterbodies

Example
Atlantic lowlands, dominantly organic soils with pastures
Alo_pa

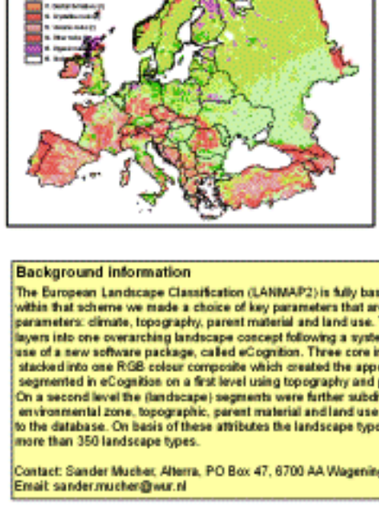
Environmental zone



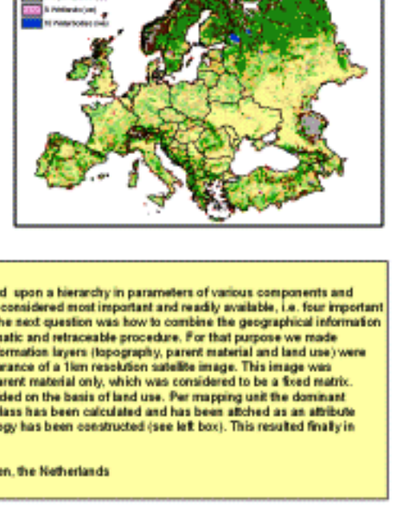
Topography



Parent material



Land use



Background information

The European Landscape Classification (LANMAP2) is fully based upon a hierarchy in parameters of various components and within that scheme we made a choice of key parameters that are considered most important and readily available, i.e. four important parameters: climate, topography, parent material and land use. The next question was how to combine the geographical information layers into one overarching landscape concept following a systematic and retraceable procedure. For that purpose we made use of a new software package, called eCognition. Three core information layers (topography, parent material and land use) were stacked into one RGB colour composite which created the appearance of a 1km resolution satellite image. This image was segmented in eCognition on a first level using topography and parent material only, which was considered to be a fixed matrix. On a second level the (landscape) segments were further subdivided on the basis of land use. Per mapping unit the dominant environmental zone, topographic, parent material and land use class has been calculated and has been attched as an attribute to the database. On basis of these attributes the landscape typology has been constructed (see left box). This resulted finally in more than 350 landscape types.

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